

CLAIMS

1. A barium titanate powder comprising a perovskite structure having a ratio  $c/a$  of 1.008 or more and ratio  $d/D$  of from 1 to 1.5, wherein "c" is a length of the c axis, "a" is a length of the a axis in the perovskite structure, "d" is an average particle diameter and "D" is an equivalent BET specific surface area diameter.

2. The barium titanate powder according to Claim 1 wherein the average particle diameter is  $0.3\ \mu\text{m}$  or less.

3. The barium titanate powder according to Claim 2 wherein the average particle diameter is  $0.05\ \mu\text{m}$  or more.

4. The barium titanate powder according to Claim 1 wherein the particle density is  $5.8\ \text{g/cm}^3$  or more.

5. The barium titanate powder according to any of Claims 1 to 4 wherein the loose bulk density is  $1.4\ \text{g/cm}^3$  or more and the packed bulk density is  $1.8\ \text{g/cm}^3$  or more.

6. A method of producing a barium titanate powder, comprising the steps of:

(1) heating a mixture containing a titanium compound and a barium compound under a gas atmosphere containing a halogen at a temperature of not less than about  $200^\circ\text{C}$  and less than the temperature for generation of barium titanate,

(2) calcining the obtained mixture under an atmosphere containing substantially no halogen at a temperature of not lower

than the temperature for generation of barium titanate.

7. The method according to Claim 6 wherein the halogen in the step (1) is at least one selected from chlorine, bromine and iodine.

5        8. The method according to Claim 7 wherein the halogen in the step (1) is chlorine.

9. The method according to Claim 7 or 8 wherein the gas containing a halogen is selected from the group consisting of molecular halogens, hydrogen halides and halides.

10       10. The method according to Claim 9 wherein the gas containing a halogen is selected from the group consisting of molecular halogens and hydrogen halides.

11. The method according to Claim 6 wherein the halogen concentration of the atmosphere in the step (1) is about 0.5  
15 vol% or more and about 50 vol% or less.

12. The method according to Claim 6 wherein the total pressure of the atmosphere in the step (1) is about 0.1 MPa or more and about 1 MPa.

13. The method according to any of Claims 6 to 12 wherein  
20 a powder obtained in the step (2) is re-calcined under an atmosphere containing substantially no halogen at a temperature of 800°C or more and 1100°C or less.